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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/536,680

10/13/2005

Hugo Camenzind

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EXAMINER

GOLOBOY, JAMES C

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

01/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/536,680	Applicant(s) CAMENZIND ET AL.	
	Examiner James Goloboy	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 4 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/29/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 4 and 11 are objected to because of the following informalities: In component (b) of claims 4 and 11, there is no lower bound on the number of carbon atoms in the alkyl group (the claim recites "C-C₁₈ alkyl"). Appropriate correction is required. For the purposes of examination, the examiner has considered the lower bound of the alkyl group to be 4 carbon atoms, as in claims 3 and 10.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ross (U.S. Pat. No. 5,892,097).

From column 5 line 65 through column 6 line 9 (example 12), Ross discloses the preparation of a product by the reaction of methyl 3,5-di-tert-butyl-4-hydroxyhydrocinnamate, and thiodiethanol. The cinnamate ester reactant is prepared by the reaction of 3,5-di-tert-butyl-4-hydroxyhydrocinnamic acid, which meets the limitations of reactant (a) of claims 1-3 where R₁ and R₂ are C₄ alkyl groups, R₃ is hydrogen, Y is hydrogen, and m is zero, and an alcohol. In column 2 line 18 Ross teaches that R₁ can also preferably be methyl, leading to a compound meeting the

limitations of claim 4. Thiodiethanol meets the limitations of reactant (c) of claims 1-4 where the R groups are hydrogens. While the alcohol used to prepare the ester reactant of example 12 is a lower alcohol than recited for component (b) of claims 1-4, it is noted that claims 1-5 are in product-by-process form, and the determination of patentability is based on the product itself. In this case, the product of example 12 of Ross (see formula I in claim 1 of Ross) will be the same as the product formed by the reaction of the components recited in claim 1. In column 1 lines 15-19 Ross teaches that these compounds are useful as antioxidants in preventing oxidative and thermal degradation of organic materials, including the functional fluids of claim 5 and the matter of claim 8.

4. Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Cottman (U.S. Pat. No. 4,829,115).

In column 5 lines 33-34, Cottman discloses an antioxidant, thiodiethylene-bis-[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate], which meets the limitations of product-by-process claims 1-5 and 8, similar to the compounds of Ross as discussed in paragraph 3 above. In column 6 lines 54-56, Cottman discloses that oils can be stabilized by compositions including the above antioxidant, forming a composition meeting the limitations of claim 6.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1797

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Gubler (U.S. Pat. No. 4,618,700).

The discussion of Ross in paragraph 3 above is incorporated here by reference.

Ross discloses a compound meeting the limitations of claim 1, but does not disclose the process of making such a compound meeting the limitations of claim 7. Ross teaches in claim 1 and example 12 that the compound is formed by the reaction of a lower alkyl ester of 3,5-di-tert-butyl-4-hydroxyhydrocinnamic acid and thiodiethanol. Ross does not define "lower alkyl"

Gubler, in column 1 lines 39-41, discloses a lower alkyl ester of [3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate], similar to the lower alkyl ester of Ross, and in column 1 lines 49-51 discloses that the "lower alkyl" group contains from 1 to 4 carbon atoms, overlapping the ranges recited for the alcohol in component (b) of claims 9-11. As the lower alkyl esters are formed by the reaction of an acid or ester meeting the limitations of component (a) of claims 7 and 9-11 and an alcohol meeting the limitations

Art Unit: 1797

of component (b), and thiodiethanol meets the limitations of component (c) of claims 9-11, formation of the compound of Ross by the using the lower alkyl esters defined by Gubler meets the limitations of claims 7 and 9-11.

It would have been obvious to one of ordinary skill in the art to use the lower alkyl esters of Gubler as the lower alkyl esters of Ross, as Gubler discloses that they are suitable lower alkyl esters for reacting with polyols to form stabilizers. It would have been obvious to one of ordinary skill to form the lower alkyl esters by reacting an acid or ester meeting the limitations of component (a) with a lower alkyl alkanol, as Ross teaches in the examples that it is a suitable way of forming esters.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Taylor (U.S. Pat. No. 3,639,447) discloses compounds having a similar structure to the products of claim 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Goloboy whose telephone number is (571)272-2476. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCG

/Glenn A Caldarola/
Acting SPE of Art Unit 1797